

CERIO Corporation

WM-200N

High Power 11n 300Mbps PoE
Wireless Access Point
Quick Installation Guide

Introduction

Overview

Aspiring to provide the best performance/price ratio for both SMB and industrial applications, **CERIO WM-200N** is uniquely designed for Wall Mount with metal case and IP50 rating for a fast, robust, secure and business class access point perfect for installation in factories, warehouses, hotels marinas, hospitals, large homes, hotspot and more.

CERIO WM-200N is compliant to the latest wireless standards that are required in highly secured enterprise networking environments. Its Wireless Distribution System (WDS) feature allows for flexible extension of wireless coverage. It can be power via three alternative methods from either the Single LAN port for Power over Ethernet (PoE), DC jack providing the ability to back up each other with fail-over redundancy function, giving **WM-200N** reliable connectivity in mission critical situations. The antenna diversity design enhances the connection reliability to improve data transmission capability. **WM-200N** High Power AP Support to pure output power to 300mW and has two detachable **8dBi high-gain antennas** for optimal wireless coverage.

CERIO WM-200N is easy-to-use and install with web-based administrative interface making configuration and client management simple and easy. In addition, management interfaces such as CLI and SNMP are also supported by **WM-200N**

Support **Multiple-SSID** capability is to use just one AP to simultaneously emulate up to **8 APs with different ESSIDs** by separate their packets by using different **VLAN IDs**. Hence, using one AP is able to act as if there are actually 8 different APs deployed in the same area. Client isolation is also supported by **WM-200N** that clients under an AP are isolated with each other.

Package Contents

➤ WM-200N (main unit)	x 1
➤ Power Adapter	x 1
➤ 8dBi Dipole SMA Omin Antenna	x 2
➤ Ground Cable	x 1
➤ RJ-45 Ethernet Cable	x 1
➤ Mounting Screw pack	x 1
➤ Rubber Gasket	x 1
➤ Warranty Card	x 1
➤ CD Manual	x 1

Quick Installation Guide

Features

Key Feature

- 300mW Pure Output Power for 11n Mode , Provide best WiFi coverage
- Operation Modes : Access Point, WDS (Repeater)
- Maximum Security with 802.1x, WPA, and AES
- Integrated IEEE 802.3af Power over Ethernet (PoE) Dual PoE Power redundancy
- Include High Gain 8 dBi detachable antenna for optimal wireless coverage.
- Support 8 Multiple-BSSIDs.
- Enclosed in an IP50 compliant metal chassis .

Access Point Feature

- Number of ESSID: 8.
- Number of associated clients per ESSID: 32.
- WDS Mode support to extend wireless coverage by connecting wirelessly to another WDS capable AP up to 8 WDS links.
- Beacon interval: adjustable to best adapt to the deployment environment.
- IAPP: to facilitate faster roaming for the stations among different APs nearby.
- Support Adjustable transmission power: 7 Levels.
- Support Tag VLAN function.

Authentication/Encryption (Wireless Security)

- WEP (64/128/152-bits) , WPA/WPA2 with TKIP or AES-CCMP, IEEE802.1X,WPA-PSK, WPA-Enterprise.
- Setting for TKIP/CCMP/AES key's refreshing period
- Hidden SSID broadcast support.
- Access Control list (ACL) by MAC Address.
- Support WEP and AES data encryption over WDS link.

Management

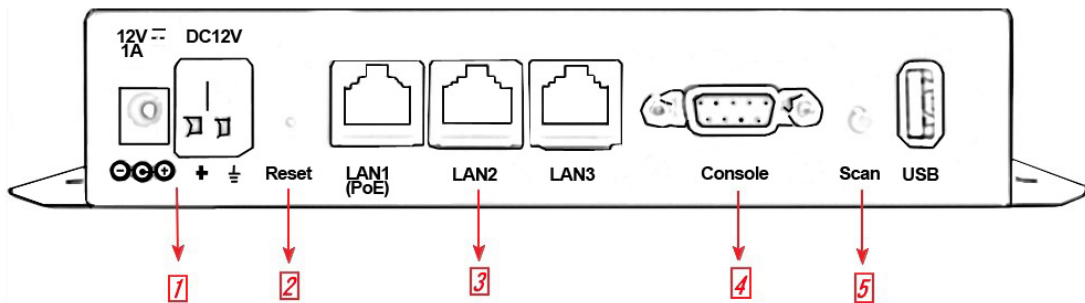
- Support SNMP V2c, V3
- Web-Based management interface.
- Upgradeable firmware.
- Software one-button-click to reset back to factory defaults.
- Configuration backup & restore.
- Support use Static IP and DHCP client.
- Support Event log.

Quick Installation Guide

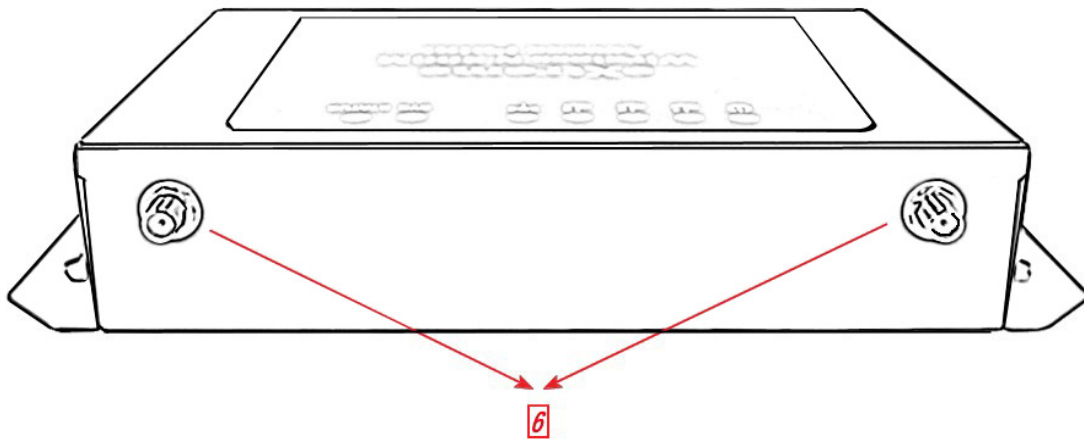
Panel Function Description

There are several LED indicators and button on the front of the WM-200N. Please refer to the definitions below :

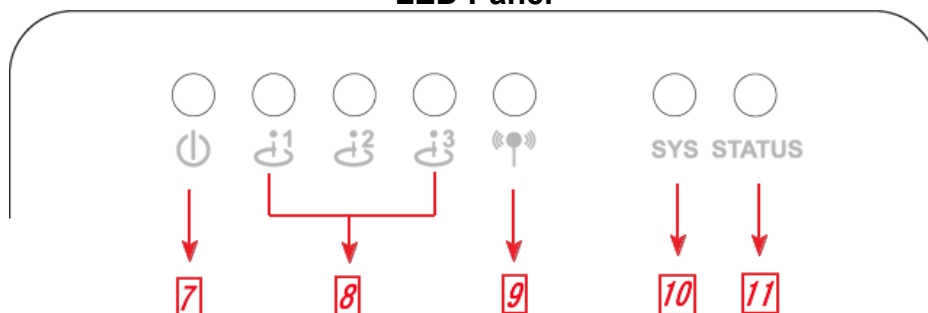
Front Panel



Real Panel



LED Panel



Quick Installation Guide

1. **12V DC Injector** : Attach the power cable here.
2. **Reset Button (Reboot)** :Press and hold the Reset button for 2 seconds to restart system. The LED except Power indicator (**this button only for quickly Reboot**)
3. **LAN1(PoE)/ LAN2/ LAN3** :The LAN1/LAN2 /LAN3 port are for connection to external network or POE switch.
4. **Console** : The Serial RS-232 DB9 cable attaches here.
5. **Scan Button** :
 - Press and hold the Reset button for **3** seconds and release to Scan New AP's Channel. The **STATUS** LED will be **FLASH**
 - **Press and hold the Reset button for more than 10 seconds to reset the system to default configurations. The **SYSTEM** LED will be **FLASH (Reset factory default)****
6. **Antenna** : WM-200N supports 1 RF Interface with 2 SMA connectors for Antenna connection.
7. **STATUS**: LED ON indicates System up, OFF indicates down, FLASH indicates Scan button activated.
8. **SYSTEM**: LED ON indicates Flash busy, OFF indicates Flash Idle
9. **WLAN** : Green LED FLASH indicates Wireless ON, and FLASH quickly indicates Wireless Transmit quickly.
10. **LAN1/LAN2 /LAN3**: Green LED ON indicates connection, OFF indicates no connection, and FLASH indicates The Port Transmit
11. **PWR** : Green LED ON indicates power on, and OFF indicates power off.

First-Time Installation and Configuration

This chapter describes how to setup your WM-200N eXtreme PoE High-End Wireless Access Point for wireless connectivity to your LAN.

Please Follow below setup

1. **Place the WM-200N at a best location.**
The best location for WM-200N is usually at the center of your wireless network.
2. **Connect WM-200N to your external network device.**
Connect one end of the Ethernet cable to the LAN1 port of WM-200N on the front panel. On your environment, connect the other end of the cable to the external Internet. The LAN1 LED indicator should be ON to indicate a proper connection.
3. **Connect WM-200N to your network device.**
Connect one end of the Ethernet cable the LAN2 port of WM-200N on the front panel. Connect the other end of cable to a PC for configuring the system. The LAN2 LED indicator should be ON to indicate a proper connection.
4. **There are two ways to supply power over to WM-200N**
 - I. Connect the **DC power adapter** to the WM-200N power socket one the front panel.



Please only use the power adapter supplied with the WM-200N package. Using a different Power adapter may damage this system

- II. WM-200N is capable of transmitting DC current via its LAN PoE port. Connect an IEEE802.3af-compliant PSE device, e.g. A PoE Switch, to the LAN1 port of WM-200N with the Ethernet cable.

Now, the hardware installation is completed.

Software Configuration

WM-200N supports web-based configuration. Upon the completion of hardware installation, WM-200N can be configured through a PC/NB by using its web browser such as Internet Explorer 6.0 or later.

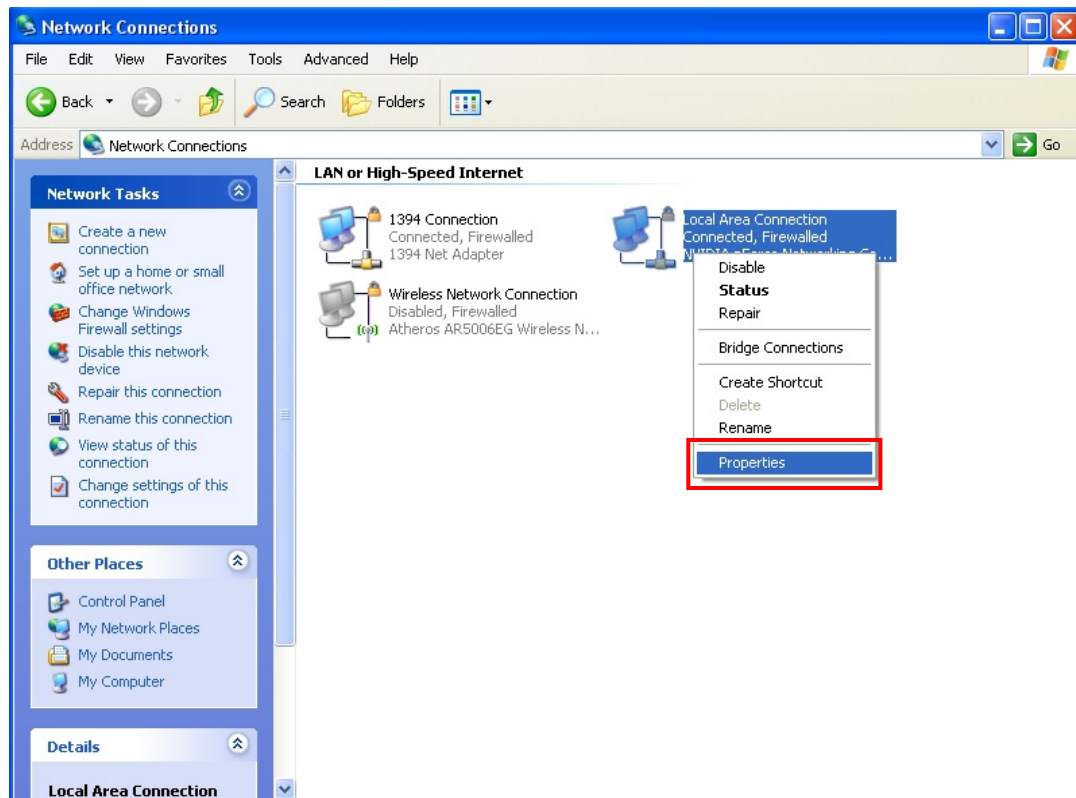
- Default IP Address: **192.168.2.254**
- Default Subnet Mask: **255.255.255.0**

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- Default Username and Password for “root”: **root / default**
- **IP Segment Set-up for Administrator's PC/NB**
Set the IP segment of the administrator's computer to be in the same range as WM-200N for accessing the system. Do not duplicate the IP Address used here with IP Address of WM-200N or any other device within the network.

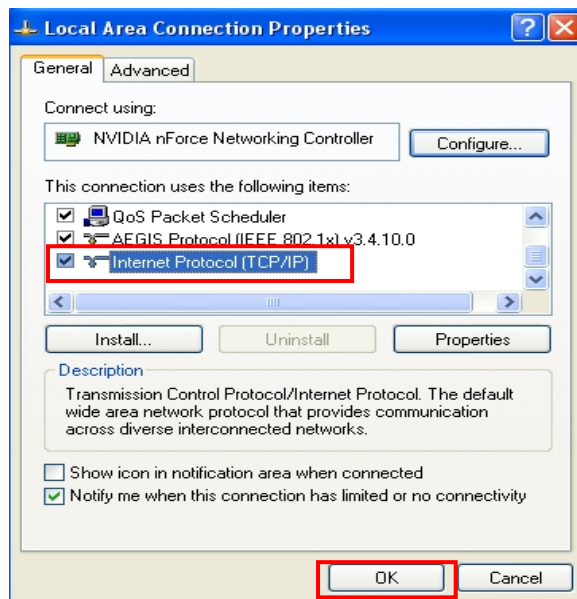
- **Example of Segment: (Windows XP)**

1. Click **Start -> Settings -> Control Panel**, and then “**Control Panel**” window appears. Click on “**Network Connections**”, and then “**Network Connections**” window appears.
2. Click right on “**Local Area Connection**”, and select Properties.

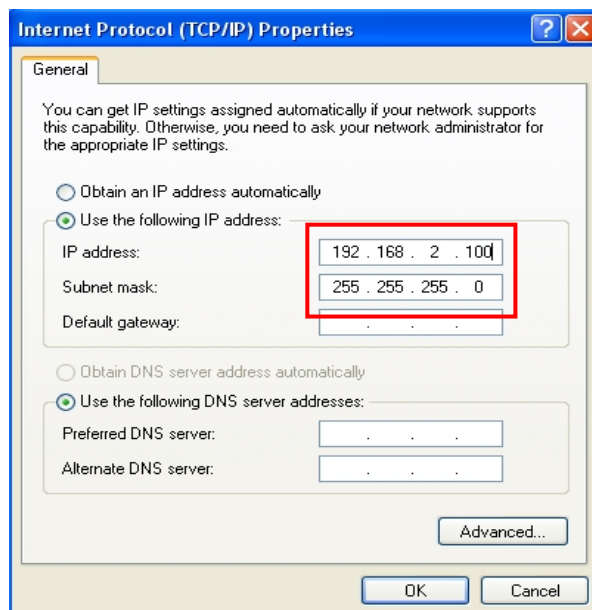


3. In “**Local Area Connection Properties**” window, select “**Internet Protocol (TCP/IP)**” and click on **Properties** button.

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4. Select **"Use the following IP address"**, and type in
 IP Address : 192.168.2.100
 Subnet mask : 255.255.255.0



➤ Launch Web Browser

Launch as web browser to access the web management interface of system by entering the default IP Address, <http://192.168.2.254>, in the URL field, and then press Enter.

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➤ System Login

The system manager Login Page then appears.

Enter "**root**" as User name and "**default**" as Password, and then click OK to login to the system.

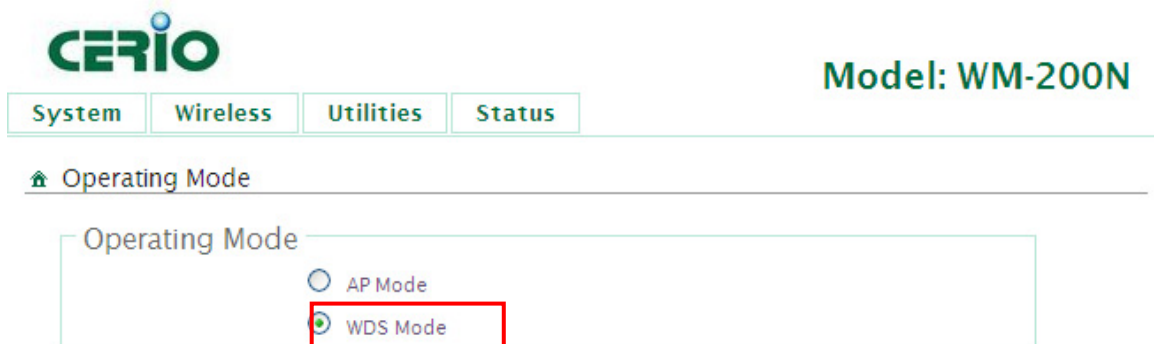
- System Overview page will appear after successful login.



Notice: WM-200N for the convenience of the administrator to change settings without affecting the user connectivity. Please make sure all the changes in the settings are completed and saved before restarting the WM-200N.

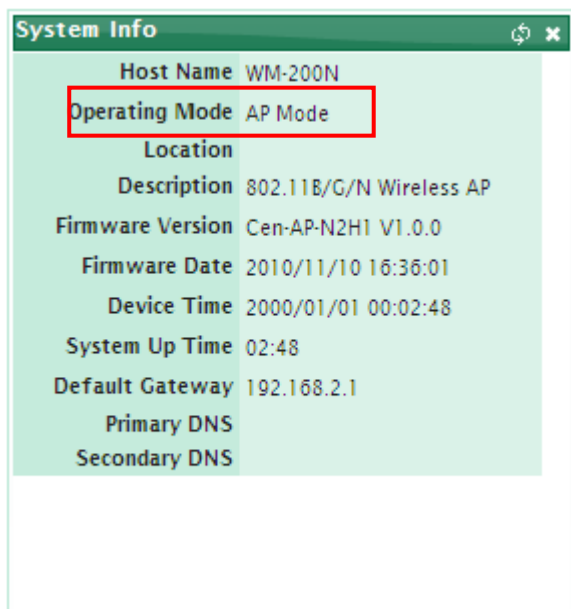
Quick Configuration

WM-200N is a two mode system which can be configured either as a access point or an WDS as desired. This section provides a step-by-step configuration procedure for basic installation on **AP Mode** and **WDS Mode**.



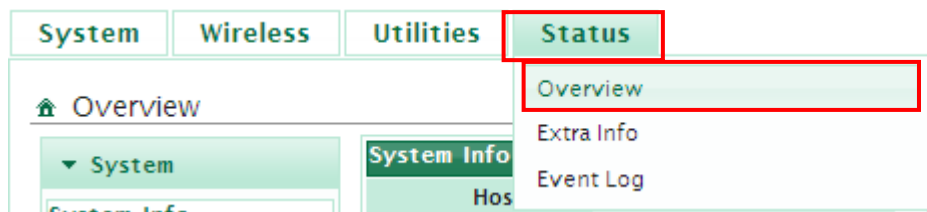
AP Mode

Ensure the **Operating Mode** is currently at **AP mode**; the web management UI can be viewed at the Status section under the System Overview page. (default operating mode is in AP Mode)



➤ Mode Confirmation

Ensure the Operating Mode is currently at AP mode; the web management UI can be viewed at the **Status** section under the **System Overview** page.



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➤ Change Password

🏠 Management Setup

System Language
Language :

System Information
System Name :
Description :
Location :

Root Password
New Root Password :
Check Root Password :

1. Click **System** -> **Management** and then Admin Configuration page appears.

System	Wireless	Utilities	Status
Operating Mode			
LAN			
Management			
Time Server			
SNMP			

System Info	
Host Name	WM-200N
Operating Mode	AP Mode
Location	

2. Enter a new password, and verify it again in the new password and check new password field respectively.

Root Password
New Root Password :
Check Root Password :

3. By default, the password for “root” user is “**default**”, if you login as “root” user that means you had granted an administrator privilege, an administrator has the right to modify anything on WM-200N.
4. Click **Save** button, and process with steps followed.

Quick Installation Guide

➤ LAN Setup

LAN Setup

Ethernet Connection Type

Mode : ☒ Static IP ☐ Dynamic IP

Static IP

IP Address : 192.168.2.254

IP Netmask : 255.255.255.0

IP Gateway : 192.168.2.1

DNS

DNS : ☐ No Default DNS Server ☒ Specify DNS Server IP

Primary DNS : 168.95.1.1

Secondary DNS :

802.1d Spanning Tree

STP : ☒ Enable ☐ Disable

1. Click **System** -> **LAN**, and then Network Setup page appears.

System Wireless Utilities Status

Operating Mode

LAN

Management

Time Server

SNMP

English

2. For the reason to management the WM-200N with an easy way, we recommend you to use **"Static IP"** for WM-200N, you must assign an **"IP address"**, **"IP Netmask"** and **"IP Gateway"** in the related fields, please notice that, if you enter a wrong information in this page, the WM-200N will not work properly, please make sure the whole IP information is suitable for your network.

LAN Setup

Ethernet Connection Type

Mode : ☒ Static IP ☐ Dynamic IP

Static IP

IP Address : 192.168.2.254

IP Netmask : 255.255.255.0

IP Gateway : 192.168.2.1

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3. Enable **“Static IP”** and **“Specify DNS Server IP”** option, and enter the related informations in the field. Click **Save** button to save the settings.

DNS

DNS : ☐ No Default DNS Server ☒ Specify DNS Server IP

Primary DNS :

Secondary DNS :

Quick Installation Guide

➤ Time Server Setup

🏠 Time Server Setup

System Time
Local Time : 2010/10/11 12:41:02

☒ Setup Time Use NTP

Default NTP Server : time.stdtime.gov.tw (optional)

Time Zone : (GMT+08:00) Beijing, Hong Kong, Singapore, Taipei

Daylight Saving Time : Disable

1. Click **System** -> **Time Server**, and then Time Server Setup page appears.

System Wireless Utilities Status

Operating Mode

LAN

Management

Time Server

SNMP

Type

Static IP Dynamic IP

2. Enable "Setup Time Use NTP", and then enter the related information. Click **Save** button to save the settings.

🏠 Time Server Setup

System Time
Local Time : 2000/01/01 00:21:41

☒ Setup Time Use NTP

Default NTP Server : time.stdtime.gov.tw (optional)

Time Zone : (GMT) Dublin, Edinburgh, Lisbon, London

Daylight Saving Time : Disable

Save

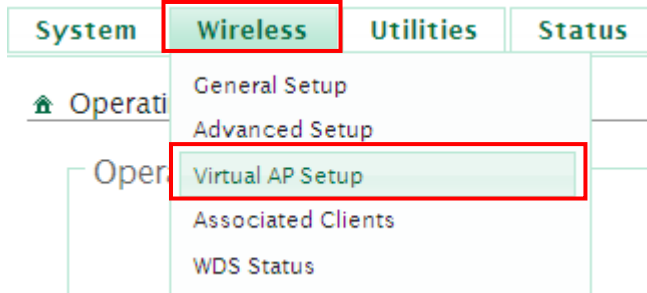
Quick Installation Guide

➤ ESSID Settings

🏠 Virtual AP Overview

VAP List						
VAP	MAC Address	ESSID	Status	Security Type	MAC Filter Setup	VAP Edit
VAP0	00:11:A3:1B:51:D9	AP00-test	On	Disabled	Disable	Edit
VAP1		AP01	Off	Disabled	Disable	Edit
VAP2		AP02	Off	Disabled	Disable	Edit
VAP3		AP03	Off	Disabled	Disable	Edit
VAP4		AP04	Off	Disabled	Disable	Edit
VAP5		AP05	Off	Disabled	Disable	Edit
VAP6		AP06	Off	Disabled	Disable	Edit
VAP7		AP07	Off	Disabled	Disable	Edit

1. Click **Wireless** -> **Virtual AP Setup**, and then VAP Setup page appears.



2. By default, the WM-200N will only enable one Virtual AP, click "**Edit**" and then VAP0 Configuration page appears.

🏠 Virtual AP Overview

VAP List						
VAP	MAC Address	ESSID	Status	Security Type	MAC Filter Setup	VAP Edit
VAP0	00:11:A3:1B:51:D9	ceriouser0	On	Disabled	Disable	Edit
VAP1		ceriouser1	Off	Disabled	Disable	Edit
VAP2		ceriouser2	Off	Disabled	Disable	Edit
VAP3		ceriouser3	Off	Disabled	Disable	Edit
VAP4		ceriouser4	Off	Disabled	Disable	Edit
VAP5		ceriouser5	Off	Disabled	Disable	Edit
VAP6		ceriouser6	Off	Disabled	Disable	Edit
VAP7		ceriouser7	Off	Disabled	Disable	Edit

3. Setup the broadcasting ESSID for easily identifying the system when device is trying to associate the service. Click **Save** button to save settings.

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Virtual AP Overview > VAP 0 Setup

Security

ESSID:

Hidden SSID: ☐ Enable ☒ Disable

Client Isolation: ☐ Enable ☒ Disable

WMM: ☒ Enable ☐ Disable

IAPP: ☐ Enable ☒ Disable

Maximum Clients:

VLAN ID(Tag): ☐ Enable ☒ Disable

Security Type: ▼

WDS Setup

Service: ☐ Enable ☒ Disable

#	Enable	WDS Peer's MAC Address	Description
01	<input checked="" type="checkbox"/>	<input type="text" value="00"/> : <input type="text" value="11"/> : <input type="text" value="a3"/> : <input type="text" value="0a"/> : <input type="text" value="5a"/> : <input type="text" value="43"/>	<input type="text" value="cc"/>
02	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>
03	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>
04	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>

➤ Wireless Security Settings

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Security Type : **WPA2-PSK**

WDS Setup

Service : ☒ Enable ☐ Disable

#	Enable	WDS Peer's MAC Address	Description
01	<input checked="" type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>
02	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>
03	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>
04	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>

WPA General

Cipher Suite : ☒ AES ☐ TKIP

Group Key Update Period :

Master Key Update Period :

Key Type : ☒ ASCII ☐ HEX

Pre-shared Key :

Save

1. For the security reason, we recommend you use the **“WPA2-PSK”** to protect your wireless network. In this page.
2. In VAP0 Configuration page, select **“WPA2-PSK”** in **“Security Type”** pull down menu. The WPA-PSK setting field will show up immediately.

Security Type : **WPA2-PSK**

WDS Setup

Service : ☒ Enable ☐ Disable

#	Enable	WDS Peer's MAC Address	Description
01	<input checked="" type="checkbox"/>	<input type="text" value="00"/> : <input type="text" value="11"/> : <input type="text" value="a3"/> : <input type="text" value="0a"/> : <input type="text" value="5a"/> : <input type="text" value="43"/>	<input type="text" value="cc"/>
02	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>
03	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>
04	<input type="checkbox"/>	<input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/> : <input type="text"/>	<input type="text"/>

3. The WPA2-PSK wireless security method is a very easy way to encrypted and transfer your data through wireless, all you have to do is enter the WPA2 key information required in the **Pre-shared Key** field, and the same information will also be used to set up devices which will then be using WM-200N services.

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WPA General

Cipher Suite: ☒ AES ☐ TKIP

Group Key Update Period:

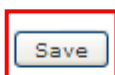
Master Key Update Period:

Key Type: ☒ ASCII ☐ HEX


Pre-shared Key:

(8-63 ASCII or 64 HEX chars)

4. Click **“Save”** and **“Reboot”** to activate all settings configured so far.



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 Press **Reboot** to Enable New Setting.

Congratulation!
The AP mode is now successfully configured.